SHORTIA

NEWSLETTER OF THE

WESTERN CAROLINA BOTANICAL CLUB

Shortia galacifolia

Oconee Bells

Spring 2024

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MEMBER NEWS

Field Trip Cancellations: Occasionally, field trips must be canceled or changed either for weather conditions or other reasons such as road closings. Such changes are sent out by email to all members by 7 AM the day of the field trip. If you do not have email access, please call the leader, co-leader, or recorder (whose phone numbers are listed on the schedule) to be sure that the walk is going to go as planned. Indoor programs are canceled when Henderson County Schools are closed (see http://www.hendersoncountypublicschoolsnc.org) but NOT necessarily canceled because of the delayed opening.

For any change of address, email or telephone number, please send an email to wcbotanicalclub@gmail.com.

Our webpage is located at http://wcbotanicalclub.org

President's Message

Cindy Carpenter

2024's Botanical Progression Begins!

As I write this I am visiting my mother in central New Jersey and looking out the picture windows on a dreary rainy day for signs of spring in the backyard I played in as child. This is Mom's 100th spring and, housebound, she is ready for its cheer. She mused the other day about not seeing any leaf buds emerging from the sweet gums, so I pointed out red maple flowers just now blooming. A forsythia shows yellow sprays as a robin hops about and neighbors' daffodils across the street join that bright palette. The Andromeda outside the living room window still holds foamy white bell-like clusters, now decorated with raindrops. Despite my sister's and my efforts in recent years to bring back the flower garden she tended years ago below the dining room window, just two pink hyacinths bloom, but they are lovely. Nearby an azalea will soon be covered in deep pink blossoms she'll enjoy. I learned weedy bittercress popping out around the yard enhances a tiny periwinkle bouquet. Spring is here, its progression beginning, even if what can be seen are only non-native volunteers or cultivated pretties.

The progression is in full swing in western North Carolina! I hope many of you will join the Club's walks, and if you can't, will soak in the beauty and cheer where you find it, whether from a garden trail or a favorite window.

As is true with any organization keeping one progressing requires the energy of its members. Thank you to all, new and renewing, for supporting the Western Carolina Botanical Club! This summer Aleta Tisdale will complete her two years as Secretary and stepping down as our Scheduler after taking the lead on organizing our walks and indoor programs. Sincere thanks to her for all she has been contributing to the Club! If you would like to consider becoming more involved with the Club as Secretary, Scheduler, Co-Scheduler or Member-at-Large please let me or Past President Joe Standaert know, and we will be happy to share the descriptions of duties with you.

Heartfelt thanks with admiration to Larason and Juanita Lambert, recently retired from their long-time volunteer work leading the "Bullington Bunch" in tending the Native Woodland Garden they were instrumental in establishing. Their devotion to providing Bullington Garden's visitors an opportunity to discover our diverse native flora represented our Club well. Please read more below about this work and other articles to inspire you in this season of regrowth.

Enjoy experiencing our unfolding Southern Appalachian spring! Hope to see you on the trail.

The Lamberts Leave a Legacy at Bullington Gardens

Cindy Carpenter

Western Carolina Botanical Club members Juanita and Larason Lambert recently retired from their seemingly tireless volunteer work at Bullington Gardens, beginning in the year 2000 when Larason constructed the 1,800 ft. core section of the Woodland Garden Nature Trail. The first part of the nature trail known as the Native Woodland Garden was developed because of their work and vision. Over the years they led a small group of our club members known as "The Bullington Bunch" in work there.

Bullington Gardens is very grateful for their over 20-year commitment to their mission. So on March 15 they held a luncheon to honor them. Several Club members had the privilege of attending.

Member Steve Mininger shared, "The resources the two of them carry in their heads cannot be replaced by even a large stack of books. They are greatly missed by those of us from WCBC who have volunteered at Bullington Gardens with them."

Steve invites anyone able and willing to continue the Lambert's legacy at Bullington Gardens to join the camaraderie on Tuesdays, weather permitting, from 9:00 a.m. till noon. "We primarily pull weeds, pick up brush, transplant, mulch the path and label plants, and in the spirit of our past leader, Juanita Lambert, have fun doing it. You are welcome to help

anytime you can, just show up on a Tuesday morning. For our newer members this is also a chance to Learn While You Earn." You can call or text Steve with questions at (828) 606-2633.

Bullington Gardens is located at 95 Upper Red Oak Trail, in Hendersonville. Hopefully some of you will be able to join, quoting our peerless Master Recorder and *Shortia* editor Ken Borgfeldt from his recent email to members, "Steve and his Merry Band."

Missing Plants - Starflower (*Trientalis borealis*)

Penny Longhurst

A mixture of Starflower (*Trientalis borealis*) and Bunchberry (*Cornus canadensis*).

At one of the indoor meetings earlier this year, Daudie asked me about Starflower (*Trientalis borealis*). She had seen a program about Acadia National Park on the South Carolina ETV series NatureScene that included pictures of the plant and asked me if it grew locally. I said that I had seen it in New England and Canada but wasn't sure about North Carolina. I sent an email to Ken, our Master Recorder, asking if the club had ever seen it and he responded that it was recorded as blooming on the "Cold Mountain Trails" on 5/26/2000 and then seen at Corneille Bryan Nature Center in May 2011 and 2013. So, not a completely missing plant, but not one that we see every year.

Fortunately, a few years ago Joe scanned a bunch of old trip reports so we could upload them to the Club's "cloud". I read the Cold Mountain Trails report, discovered that Bonnie Arbuckle was the recorder and Betty Jones had also been present, and asked them what they remembered about the visit. The field trip was on private property belonging to former club members Jan and Happy Fishback. Bonnie wrote in her trip report "*It was a special treat to see the rare Trientalis borealis (Star Flower). Hap had brought some plants to the house. They were donated for planting in Maxilla's [Evans] Junaluska gardens.*" My curiosity was aroused! I checked old issues of Shortia for 2000 and found a "Recorder Ramblings" written by Betty that provided more information. She wrote "*It was an easy and pleasant walk along the roads of Cold Mountain. Happy Fishback saved us a lot of effort by bringing several of the rare Starflower (Trientalis borealis) plants down from the top of the mountain. (Don't be concerned*

they were being donated to a botanical garden)." That botanical garden was Corneille Bryan, which explained how the club was able to see them there, ten years later.

Before the club website was created, field trips were documented by the club historian in scrapbooks. They are stored in the Rowell Bosse North Carolina Room on the second floor of the Transylvania County Library in Brevard. We hope to digitize them and upload them to the website soon. Dana Herrman was the historian in 2000. In the scrapbook for 2000 I found pictures and information about the field trip, including a photograph of the Starflower (see here). However, Recorder Ramblings in the Fall 2011 Shortia did not mention seeing Starflower during the visit to Corneille Bryan and there were no Recorder Ramblings in 2013. There were also no descriptions of either field trip in the scrapbooks.

Linnaeus created the genus *Trientalis* and published it in his Species Plantarum in 1753. It contained two species, *T. europaea* and *T. capensis*. *T. europaea* was from the boreal regions of Europe and *T. capensis* was "*Habitat ad Cap. b. spei*" (from the Cape of Good Hope, South Africa). In North America there are three different Starflower species, *T. latifolia* and *T. europaea* which grow only in the Western states and provinces and *T. borealis* which grows in the Mid-Atlantic and Northeastern states and most of Canada. Our Starflower, *T. borealis*, was first described by Rafinesque (Raf) in his report on "*the new genera and species discovered by himself*" (he was considered by most of his contemporaries to have an overinflated ego!). It appears in the section where he describes plants that were thought to be the same as European species but "*which, upon investigation, have appeared to me different*". He indicates that it was previously thought to be *T. europaea*.

Weakley reports that *T. borealis* is widespread in the mountains of Virginia and found in a few isolated places in northern Georgia and NE Tennessee. Dellinger reported finding several thousand plants in Southern Haywood County and Weakley found more at another site nearby. Janie Marlow at namethatplant.net photographed plants at Balsam Mountain Preserve in Jackson County. Thus, in addition to those the club saw on their Cold Mountain field trip, Trientalis is found in other high elevation locations in North Carolina. We just need to look harder and maybe higher!

Noteworthy Collections

NORTH CAROLINA

Trientalis borealis Raf. (PRIMULACEAE).—Southern Haywood County, 3 October 1988, *Dellinger 1-3-10-88* (WCUH, NCU).

Significance. This is the first record for North Carolina. In June of 1988 I discovered several thousand of these plants growing in a mixed cove hardwood-hemlock forest at an elevation of approximately 1070 m (3500 ft). A later visit by Alan Weakley of the North Carolina Natural Heritage Program revealed another site of several hundred plants approximately 488 m (1600 ft) from the first site. This station is about halfway between the nearest known stations in north Georgia and east Tennessee (Duncan, W.H. 1970. Rhodora 72: 489-492.).—Bob Dellinger, Route 67, Box 36N, Cullowhee, North Carolina 28723.

The word *Trientalis* comes from the Latin meaning one-third of a foot (the metric system was not introduced until 1799) and refers to the height of the plant, although those I have seen were probably shorter. *Borealis* refers to the circumboreal locations where the plant is found. *Trientalis* species are members of the *Primulaceae* (Primrose) family, although based on genetic analysis they may be moved to the *Lysimachia* genus in the *Myrsinaceae* (Myrsine) family. Thus, *Trientalis borealis* will probably soon become *Lysimachia borealis*. Fortunately, neither Weakley nor ITIS has made that change yet.

Trientalis borealis plants have lance-shaped leaves with pointed tips, arranged in a characteristic single layer whorl. They have no or very fine teeth. A single mid vein runs from the base of the leaf to the tip, with side veins branching off it. Each plant bears one or two attractive white flowers with five to nine petals forming a star-like shape. In addition to its distribution, *T. borealis* differs from *T. latifolia* and *T. europeae* principally in the shape of the leaves. Like *T. borealis, T. europeae* has white flowers but *T. latifolia* has pink flowers.

So, it looks like we need to go exploring above the 3,500-foot elevation in Haywood or Jackson Counties, visit Corneille Bryan, or head North to find Starflowers. Maybe we'll get lucky on our Parkway Deep South trip and spot some plants. Let's keep our eyes peeled!

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Which *Trillium, Erectum* or *Simile?*

Lucy Prim

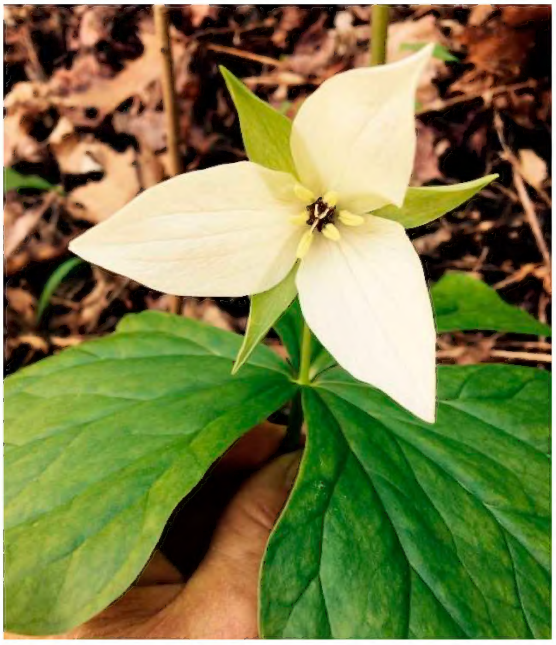
Years ago I remember going to Twin Bridges and catching snatches of little side conversations about the Trilliums. I wasn't sure what it was all about, but I was able to make out that the discussions revolved around the question of whether or not we were seeing *Trillium simile*. Being overwhelmed with other things to learn and think about, I didn't pay much attention to the discussions. I was mystified though by the general feeling I was picking up—- perplexity. Why didn't these very smart Botany Club members not know what Trillium it was? Was it really so confusing? I decided to try to understand the issue, so last year I wrote an article for Shortia titled "Three White Trilliums". I sent it off to Ken. A few days later Ken wrote back and said I'd left out the white *Trillium erectum*. Good grief! I'd forgotten how *Trillium erectum* can be white! I think of it as being dark red, but *T. erectum* can be all sorts of colors, including white. After thinking it over I realized by forgetting white *Trillium erectum*, I'd completely missed the main point of confusion!

So this article, instead of being in last year's springtime Shortia, has been completely rewritten and retitled, and will be in this year's, unless Ken and the others proofreading it find something else wrong!

Trillium erectum and *T. simile* both hold their flowers above the leaves on pedicels, and they both have big black ovaries that are very easy to see. So when we see a Trillium like this (it doesn't matter what color it is—both could be dark red for instance) we can ask which one it is. The difference that is most easy to see is whether the petals are two times wider than the sepals and ovate and possibly overlapping, or are they less wide and lanceolate? If it's the former, it's more likely to be *T. simile*.

Borderline cases, in which the petals are barely or not quite two times wider than the sepals, and where the petal shape is inbetween ovate and lanceolate can be ambiguous. So then we can scrutinize the flower more closely and look for other features, such as how long the sepals are compared to the petals, and whether or not the flower petals are in the same plane as the sepals, or form more of a cup shape, and then if we want to try bending down and smelling the flowers, we could do that too! I wrote these different features down in the chart on the next page.

If we can't be sure about the identification, we can preserve our mental tranquility by not getting too agitated and frustrated—simply make our best guess and be content with that. But then, that sort of blasé complacency would lead us to miss out on all the fun of discussing which Trillium it might be, and sending emails and pictures back and forth and reading complicated keys. So, in the tradition of the Botany club, we might as well continue the side conversations about which *Trillium* it is, *erectum* or *simile*. Sometimes ambiguity and perplexity is a big part of the fun of a Botany Club walk!

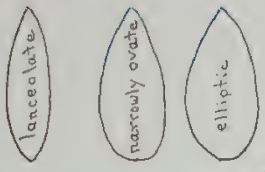


T. simile

T. simile **(showing cup shape)**

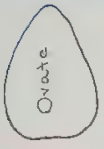
T. erectum

Trillium erectum



Petal shape varies
Color- white, maroon, yellowish
Petals usually <2X width of sepals
The flower spreads from base
Smells unpleasant

Trillium simile



Petals ovate
Color- usually white
rarely maroon
Petals usually longer than sepals and
>2X wider than sepals
The flower is cup-shaped
Smells pleasant

Pipsissiwa… or Not?

Penny Longhurst

"Pipsissewa" is a wonderful word. It rolls off the tongue and is such fun to say. But, until recently I wasn't sure that I had ever seen it, and probably abused several members who identified it on our field trips. Sorry about that! In part, my confusion came from our database list of plants. It shows two Chimaphila species, "Spotted Wintergreen (*Chimaphila maculata*)" and "Pipsissewa, Prince's Pine (*Chimaphila umbellata)*" [now known as *Chimaphila umbellata var. cisatlantica,* although Weakley says this needs further study! Oh, goody!]. In addition to the Pipsissiwa conundrum, I was wondering why we call *C. maculata* Spotted Wintergreen when, in my humble opinion, it has striped leaves. So, I did a little research. For the sake of clarity, I will use our current database names for the plants in this discussion.

Spotted Wintergreen (*Chimaphila maculata*) plant

Spotted Wintergreen (*Chimaphila maculata*) Flowers

Spotted Wintergreen (*Chimaphila maculata*) Fruit

Pipsissewa, Prince's Pine (*Chimaphila umbellata)* Plant

Pipsissewa, Prince's Pine (*Chimaphila umbellata)* Flowers

Pipsissewa, Prince's Pine (*Chimaphila umbellata)* Fruit

Linnaeus named these plants *Pyrola maculata* and *Pyrola umbellata* in his 1753 "*Species Plantarum*". In 1811, they were placed in the new genus *Chimaphila* by Pursh, separating them from the other members of the genus *Pyrola*. He chose the genus and its common name "Wintergreen" from the Greek word *cheima* meaning "winter weather", because the plants are evergreen.

The species name for *Chimaphila maculata* is derived from the Latin word *macula* which means "spotted". We have several plants in our database with a similar species name. Those we are most familiar with include Spotted Joe-Pye-Weed (*Eutrochium maculatum*), referring to its spotted stem, and Nodding Mandarin (*Prosartes maculata*) with spotted petals. However, a spotted or dotted appearance is not mentioned in any of the sources that describe *C. maculata*, although some say it has mottled or variegated leaves. In contrast, most sources say it has a wide white stripe. In fact, Linnaeus who named the plant specifically says that its leaves have a "white line on both sides". LeGrand states that Striped Wintergreen would be a better common name than Spotted Wintergreen, since the leaves are striped, rather than spotted. So, the jury is out on the derivation of both its common and botanical names.

As you can see from the table below, *Chimaphila maculata* is known by several different common names, depending on the source: Pipsissewa, Striped Prince's Pine, Rat's Bane, Spotted Wintergreen, and Striped Wintergreen. The name "Pipsissewa" is thought to be derived from the Cree word *pipsisikweu* meaning "break into pieces" referring to its purported ability to break kidney stones, or from an Eastern Abenaki word meaning "flower of the woods". I could find no explanation for the name "Prince's Pine", but "Rat's Bane" usually refers to a poisonous plant, which is a little strange since native Americans are supposed to have used both *Chimaphila* species medicinally. Pursh wrote "This plant is in high esteem for its medicinal properties among the natives, they call it *Sip-si-sewa*. I have myself been witness of a successful cure made of a decoction of this plant in a very severe case of hysterics. It is a plant eminently deserving the attention of physicians." However, it has been suggested that he confused the two *Chimaphila* species and these medicinal properties should have been attributed to *Chimaphila umbellata.*

We are all familiar with *Chimaphila maculata*; it is very common in this area. It has dark green evergreen leaves with a broad white stripe. The base of the leaf is rounded and widest closer to the base. Small clusters of nodding flowers are found at the tip of the plant's stem, with 5 white petals and 10 stamens each with a pair of anthers surrounding a large rounded green ovary and stigma. Although the flowers dangle, the fruits are borne upright, like those of Indian Pipes (*Monotropa uniflora*).

	Chimaphila maculata	*Chimaphila umbellata [var. cisatlantica]*
Horn et. al.	Spotted Wintergreen, Pipsissewa	
ITIS	Striped Prince's Pine	Pipsissewa, Prince's Pine
LeGrand et. al.	Spotted Wintergreen	Pipsissewa
NamethatPlant.net & Weakley	Pipsissewa, Striped Wintergreen, Rat's Bane	Prince's-Pine
Native Plant Trust	Pipsissewa, Spotted Wintergreen	Noble Prince's-pine, Pipsissewa
Pursh	Sip-si-sewa, Wintergreen	Wintergreen [Ex. *C. corymbosa]*
Radford et al.	Spotted Wintergreen, Pipsissewa	Pipsissewa
Smith	Spotted Wintergreen	Pipsissewa, Prince's Pine
WCBC	Spotted Wintergreen	Pipsissewa, Prince's Pine

Pursh also included *Chimaphila umbellata* in his 1811 Flora, although he called it *Chimaphila corymbosa*. Common names for *C. umbellata* include Noble Prince's-pine, Pipsissewa, Prince's Pine, and Wintergreen. When I was checking my files, I realized that I have seen this plant many times while hiking in New England, where it is quite common. Weakley shows that *C. umbellata* may occur in the Piedmont of the Carolinas but is rare in the mountains. It is principally a Northern species, more common from Pennsylvania to the Canadian Provinces. Nonetheless, the club reported seeing leaves of *C. umbellata* at the Kellogg Center in 2005 and on the Galax trail in DuPont in 2006. However, we have not seen it since then. Next time we are at the Kellogg Center we need to look for it. The flowers and fruit of *C. umbellata* are very similar to those of *C. maculata*. However, the leaves are unvariegated and broadest above the middle. To my eye, the teeth on its leaves are larger than those of *C. maculata*. *C. umbellata* was reputed to be useful in the treatment of several diseases and medical conditions, including edema, fever, inflammation, menstrual problems, skin problems, rheumatism, and tuberculosis.

There is a third native Chimaphila species, Little Prince's Pine (*Chimaphila menziesii*), named after the Scottish botanist, Archibald Menzies, who collected plants in the Pacific Northwest including the Western version of our Minniebush (*Menziesia pilosa*). *C. menziesii* is limited to the Western states. My picture was taken in the North Cascades of Washington. The plant is almost identical to *C. umbellata* except for its beautiful pink flowers.

Before I started writing this article, I had planned to petition the Board for a change of the common name for *Chimaphila maculata* in our plant lists from Spotted to Striped Wintergreen. However, based on the sources I consulted it is quite clear that the overwhelming favorite name is Spotted Wintergreen, despite the absence of obvious spots. Pipsissewa comes a close second. Therefore, I promise that next time you identify Pipsissiwa on our field trips I will agree with you wholeheartedly, although I'm kind of tempted by Rat's Bane!

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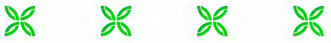

SHORTIA

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The mission of the Club is to identify and study native plants and their habitats and to advocate the protection of biodiversity in our natural world. Membership is open to all. Individual/family memberships are $15/year. Lifetime membership is $150. Send completed membership form and dues to Western Carolina Botanical Club, 232 Frazier Road, Brevard, NC 28712